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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/676,109

10/02/2003

Koji Takayama

8014-1068

8380

466

7590

09/14/2006

EXAMINER

ENSEY, BRIAN

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ARLINGTON, VA 22202

ART UNIT

PAPER NUMBER

2615

DATE MAILED: 09/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/676,109		TAKAYAMA ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Brian Ensey		2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 identifies “the reinforcing member comprises triaxial weave and/or is made of triaxial combined non-woven fabric.” The specification does not teach how the reinforcing member can comprise **triaxial weave and is made of triaxial combined non-woven fabric**. On page 6, lines 11-21 of the specification, it teaches the reinforcing member composed of triaxial weave in one aspect of the speaker surround. On page 6, line 22 to page 7, line 2 of the specification, it teaches the reinforcing article is made of triaxial combined nonwoven fabric in another aspect of the speaker surround. Nowhere in the specification does it teach how a combination of triaxial weave and triaxial combined nonwoven fabric can be used together in the reinforcing member as claimed. Therefore, the subject matter was not described in the specification in such a way as to enable one skilled in the art to make and/or use the invention.

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Claim 14 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 14 identifies “the urethane foam situated on one side of the reinforcing member is different from the urethane foam situated on the other side of the reinforcing member as to hardness, thickness, or composition.” The specification teaches the use of urethane foam on both sides of the reinforcing member but does not teach any variation in the characteristics of the urethane foam on opposite sides of the reinforcing member. Therefore, the subject matter was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sano Japanese Patent No. JP402194800A in view of Kimura Japanese Patent No. JP355075397A in further view of Dow U.S. Patent No. 3,874,422.

Regarding claim 1, Sano discloses a speaker surround arranged between a diaphragm and a frame of a speaker, the speaker surround comprising: a reinforcing member (1) installed inside foam (7), the reinforcing member being the one with no expansion and contraction upon deformation based on the displacement of the diaphragm (See Fig. 2 and translation constitution). Sano does not expressly disclose said foam is a urethane material or the reinforcing member comprises triaxial weave and/or is made of triaxial combined nonwoven fabric. However, the use of urethane foam in speaker surrounds and diaphragms is well known in the art and Kimura teaches a urethane foam (7) with an impregnated silk or cotton reinforcing member (8) for forming a speaker surround (See Fig. 3 and translation constitution). Further, it is well known in the art to utilize triaxial woven fabric for reinforcement in curved surfaces as taught by Dow (See col. 1, lines 3-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use urethane foam reinforced with a triaxial woven fabric for a lightweight, reinforced inexpensive surround (See Sano purpose and Dow col. 1, lines 3-12).

Regarding claim 2, Sano discloses a reinforcing member but does not expressly disclose said the reinforcing member is a mesh reinforcing member. However, Kimura teaches a silk or cotton reinforcing member which is inherently a mesh by design (See Fig. 3 and translation

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constitution). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a mesh design to reinforce the surround of Sano for light weight and flexibility.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sano in view of Kimura in view of Dow as applied to claim 1 above, and further in view of Niguchi et al. U.S. Patent No. 4,140,203.

Regarding claim 3, the combination of Sano in view of Kimura in view of Dow discloses a reinforcing member as claimed. The combination does not expressly disclose the reinforcing member is made of nylon fiber. However, Niguchi teaches a diaphragm and surround of woven or nonwoven fabric of fibrous materials including nylon for reinforcing the structure (See Figs. 1-5 and col. 4, lines 18-22). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a nylon to reinforce the surround of the combination of Sano in view of Kimura in view of Dow for lightweight and flexibility.

### ***Response to Arguments***

Applicant's arguments filed 8/28/08 have been fully considered but they are not persuasive.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the

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applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

The use of triaxial fabrics was known for purposes of reinforcement in curved products or for other special applications (See Dow U.S. Patent 3,874,422, column 1, lines 1-12). Further, the use of urethane foam impregnating a fabric substrate for a speaker diaphragm and surround was well-known (See Kimura Japanese Patent 55075397 A) and the use of foam on both sides of a reinforcing substrate for a speaker surround was also well-known (See Sano Japanese Patent No. 02194800 A). Therefore, the combination of Sano in view of Kimura and further in view of Dow for a triaxial fabric reinforcing member in a speaker surround which was within the level of ordinary skill at the time the claimed invention was made.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Ensey whose telephone number is 571-272-7496. The examiner can normally be reached on Monday - Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

### **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
P.O. Box 1450  
Alexandria, Va. 22313-1450

### **Or faxed to:**

(571) 273-8300, for formal communications intended for entry and for informal or draft communications, please label "PROPOSED" or "DRAFT".  
Hand-delivered responses should be brought to:

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Brian Ensey  
Examiner  
September 12, 2006